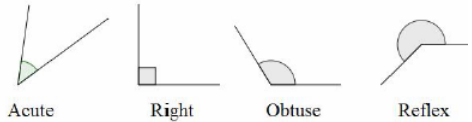
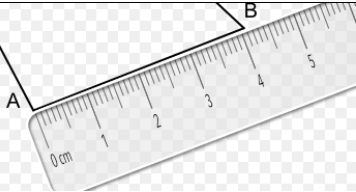
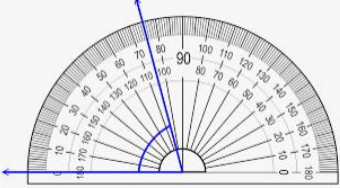
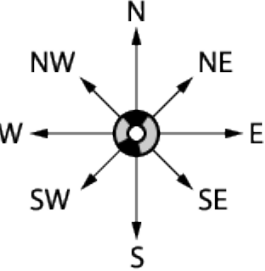
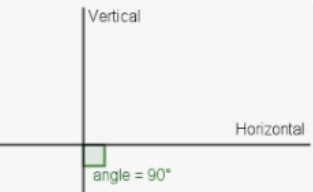
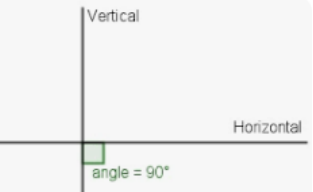
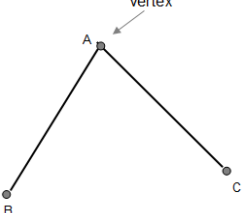
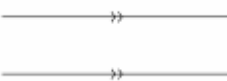
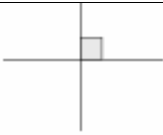
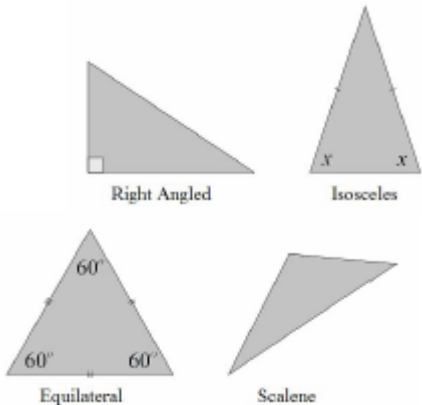
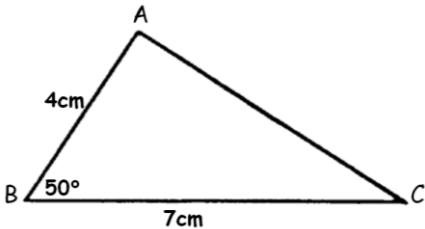
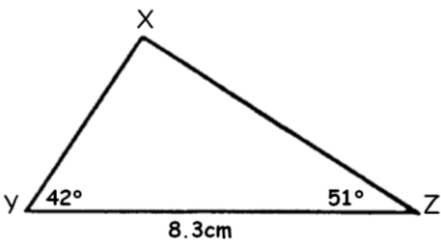
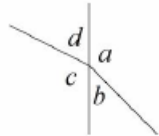
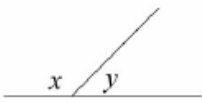
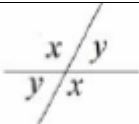
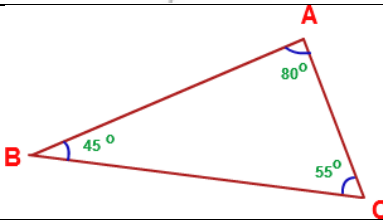
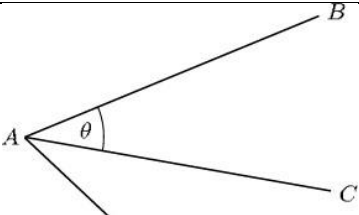
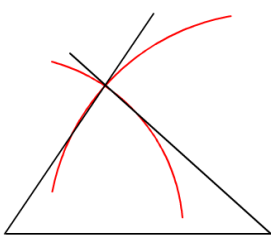
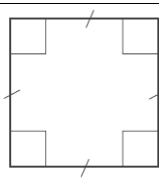
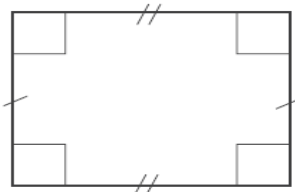
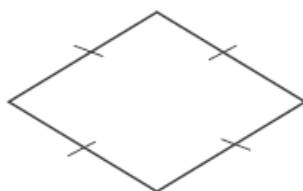
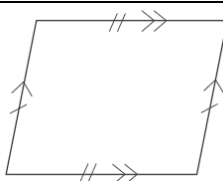
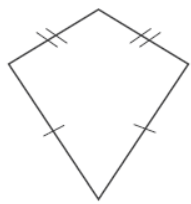
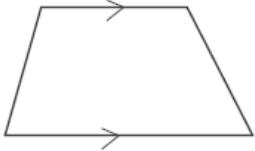
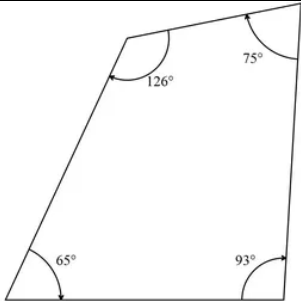
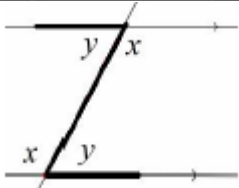
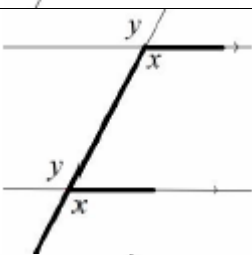
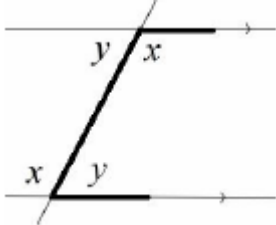


Topic: Angles Year 7

Topic/Skill	Definition/Tips	Example
Types of Angles	Acute angles are less than 90°. Right angles are exactly 90°. Obtuse angles are greater than 90° but less than 180°. Reflex angles are greater than 180° but less than 360°.	 Acute Right Obtuse Reflex
Measuring Lines	Measure in cm and mm There are 10mm in a cm Place the 0 of the ruler onto the end of the line	
Measure and draw angles with a protractor	Always measure and draw an angle from the zero. Check which way round you need to use the protractor. To draw an angle, draw a horizontal line and mark a dot at one end. Place the centre crosshair of the protractor on the dot and mark the angle	
Compass Directions	You can use an acronym such as 'Never Eat Shredded Wheat' to remember the order of the compass directions in a clockwise direction. Bearings: $NE = 045^\circ$, $W = 270^\circ$ etc.	
Horizontal	A straight line that goes from left to right or right to left.	
Vertical	A straight line that goes from top to bottom and is perpendicular (at right angles) to the horizontal	
Vertex	A corner or a point where two lines meet.	
Parallel	Parallel lines never meet.	

Perpendicular	Perpendicular lines are at right angles. There is a 90° angle between them.	
Types of Triangles	Right Angle Triangles have a 90° angle in. Isosceles Triangles have 2 equal sides and 2 equal base angles. Equilateral Triangles have 3 equal sides and 3 equal angles (60°). Scalene Triangles have different sides and different angles. Base angles in an isosceles triangle are equal.	 Right Angled Isosceles Equilateral Scalene
Constructing Triangles (Side, Angle, Side)	1. Draw the base of the triangle using a ruler. 2. Measure the angle required using a protractor and mark this angle. 3. Remove the protractor and draw a line of the exact length required in line with the angle mark drawn. 4. Connect the end of this line to the other end of the base of the triangle.	
Constructing Triangles (Angle, Side, Angle)	1. Draw the base of the triangle using a ruler. 2. Measure one of the angles required using a protractor and mark this angle. 3. Draw a straight line through this point from the same point on the base of the triangle. 4. Repeat this for the other angle on the other end of the base of the triangle.	
Angles at a Point	Angles around a point add up to 360°.	 $a + b + c + d = 360^\circ$
Angles on a Straight Line	Angles around a point on a straight line add up to 180°.	 $x + y = 180^\circ$
Opposite Angles	Vertically opposite angles are equal.	
Angles in a Triangle	Angles in a triangle add up to 180°.	

Labelling Angles	Can use one lower-case letters, eg. θ or x Can use three upper-case letters, eg. BAC	
Constructing Triangles (Side, Side, Side)	1. Draw the base of the triangle using a ruler. 2. Open a pair of compasses to the width of one side of the triangle. 3. Place the point on one end of the line and draw an arc. 4. Repeat for the other side of the triangle at the other end of the line. 5. Using a ruler, draw lines connecting the ends of the base of the triangle to the point where the arcs intersect.	
Properties of Quadrilaterals Square	• Four equal sides • Four right angles • Opposite sides parallel • Diagonals bisect each other at right angles • Four lines of symmetry Rotational symmetry of order four	
Rectangle	• Two pairs of equal sides • Four right angles • Opposite sides parallel • Diagonals bisect each other, not at right angles • Two lines of symmetry • Rotational symmetry of order two	
Rhombus	• Four equal sides • Diagonally opposite angles are equal • Opposite sides parallel • Diagonals bisect each other at right angles • Two lines of symmetry • Rotational symmetry of order two	
Parallelogram	• Two pairs of equal sides • Diagonally opposite angles are equal • Opposite sides parallel • Diagonals bisect each other, not at right angles • No lines of symmetry • Rotational symmetry of order two	
Kite	• Two pairs of adjacent sides of equal length • One pair of diagonally opposite angles are equal (where different length sides meet) • Diagonals intersect at right angles, but do not bisect • One line of symmetry • No rotational symmetry	

Trapezium	• One pair of parallel sides • No lines of symmetry • No rotational symmetry Special Case: Isosceles Trapeziums have one line of symmetry.	
Angles in a Quadrilateral	Angles in a quadrilateral add up to 360°.	
Alternate Angles	Alternate angles are equal. They look like Z angles, but never say this in the exam.	
Corresponding Angles	Corresponding angles are equal. They look like F angles, but never say this in the exam.	
Co-Interior Angles	Co-Interior angles add up to 180°. They look like C angles, but never say this in the exam.	

Where else is the Angles topic used in maths?

Transformations

Algebra

Links to other subjects